Modern 3D, S-band Surveillance/Navigation Capabilities (TRL 9), Proven Performance in the Littoral Environment, Multibeam Radar with Solid State GaN Transmit/Receive (T/R) Modules, Integrated Identification Friend or Foe (IFF)

AN/SPS-76

Long Range 3D Air/Surface Search Radar

AN/SPS-76 Radar

The AN/SPS-76 – A Modern 3D Radar Designed to Meet Maritime Surveillance Challenges

The AN/SPS-76 is a proven, 3D, long-range, S-Band radar ideal for the littoral environment. The AN/SPS-76 delivers excellent target discrimination, including small, low-elevation targets such as Unmanned Aerial Vehicles and missiles. The antenna is electronically stabilized and the Exelis developed Transmit/Receive (T/R) Modules are solid-state GaN technology..

As an existing, Commercial Off-The-Shelf / Non-Developmental Item (NDI) product, the AN/SPS-76 islow-risk and complements our long-standing SPS-48 family of 3D S-Band radars. The USN can leverage on-going Exelis 3D radar technology investments Transfer of Knowledge and Technology programs. Our license agreement enables us to provide a total US-based solution, including the radar system, support, and upgrades.

Designed with advanced Open Architecture signal processing capabilities, the AN/SPS-76 delivers frequency diversity (no unique emitter issue for USN large decks) and multi-role capability in one mode (> 500 air and surface targets).

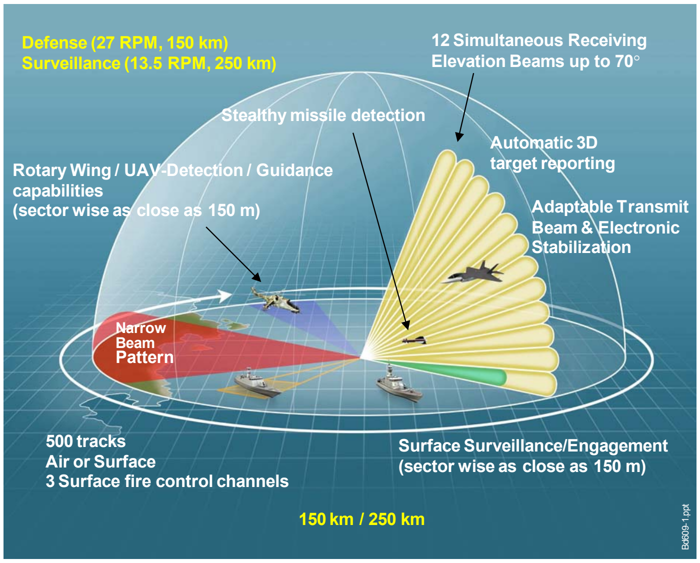
LITTORAL ENVIRONMENT KEY FEATURES:

- Multipath effect mitigation through simultaneous target/image receive channels
  - Full coherency between the real target and the image
  - Accurate measurements for low target elevation
- Radial velocity (spectrum) discrimination for plot/contact association
  - Higher false alarm rate during plot extraction
  - Rapid collection identification based on the two-hit initial criteria
  - Contact classification possible from the kinematics model and measuring spectrum characteristics
- Operator operational control modes
  - Fast-reaction alert zones
  - Fire control windows (splash detection)
  - Ducting detection mode

TWO OPERATOR-SELECTABLE FUNCTIONAL MODES ARE AVAILABLE:

- Defense – Optimized for ship and escorted ships protection
  - Instant detection of air targets up to 81NM (150km)
  - Instant detection of surface targets to 22NM (40km)
  - Rotation rate of 27 RPM (2.2-sec update)
- Surveillance – Optimized for long-range surveillance
  - Instant detection of air targets up to 135NM (250km)
  - Instant detection of surface targets to 22 NM (40km) or 43NM (80km) for ducting
  - Rotation rate of 13.5 RPM (4.4-sec update)

Features	***Benefits***
» Low Fixed Acquisition Cost	» Aids in Meeting Ship Cost Cap
» COTS / NDI	» Minimizes Schedule Risk
» Well-Defined Interfaces	» Minimizes Ship Integration Risk and Cost
» Scalable, Modular Design	» Enables Advanced Waveforms and Other Tactical Submode Customizations Enables Spiral Upgrade Path
» Open Architecture Computing Environment-Compliant Data Distribution Service	» Reduces Risk of Combat Management System Integration and Cost
» Program Management and Long-Term Support Efficiencies Linked with the SPS-48	» Enables Links to USN Integrated Digital Environments Reduces Documentation Costs
» Minimized Weight	» Reduces topside weight and overall footprint
» GaN Technology	» Delivers a Low-Weight, High-Efficiency Design – Developed by Exelis


Defense (27 RPM, 150 km)
Surveillance (13.5 RPM, 250 km)
12 Simultaneous Receiving Elevation Beams up to 70°
Stealthy missile detection
Automatic 3D target reporting
Rotary Wing / UAV-Detection / Guidance capabilities (sector wise as close as 150 m)
Adaptable Transmit Beam & Electronic Stabilization
Narrow Beam Pattern
500 tracks
Air or Surface
3 Surface fire control channels
Surface Surveillance/Engagement (sector wise as close as 150 m)
150 km / 250 km
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